

REMARKS

The Office Action mailed February 12, 2003 has been reviewed and carefully considered. Claim 19 is canceled. Claims 1, 21, and 22 have been amended. Claims 1-10, 12-18, 20-22, and 29 are pending in this application, with claim 1 being the only independent claim. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed February 12, 2003, claims 1-10, 12-14, 19, 20, 22, and 29 stand rejected under 35 U.S.C. §103 as unpatentable over EP 099 264 (Doyle) in view of U.S. Patent No. 3,921,527 (Raschke) and U.S. Patent No. 4,705,696 (Calabrese).

Claim 15 stands rejected under 35 U.S.C. §103 as unpatentable over Doyle, Raschke and Calabrese in view of U.S. Patent No. 3,607, 255 (Back).

Claims 16 and 17 stand rejected under 35 U.S.C. §103 as unpatentable over Doyle, Raschke and Calabrese in view of U.S. Patent No. 4,103,616 (Chu).

Claim 18 stands rejected under 35 U.S.C. §103 as unpatentable over Doyle, Raschke and Calabrese in view of U.S. Patent No. 4,020,762 (Peterson).

Claim 21 stands rejected under 35 U.S.C. §103 as unpatentable over Doyle, Raschke and Calabrese in view of U.S. Patent No. 3,650,797 (Tomanek).

Independent claim 1 has been amended and recites the following steps: 1) electrically charging the printing form over its entire surface, 2) applying liquid toner particles to the printing form so that the toner particles are attracted to the entire surface of the printing form to form a layer, 3) controlling the thickness of the layer of liquid toner particles by controlling at least one of the voltage and the time of the electrical charging, 4) fixing the liquid toner particles with a source of energy in accordance with a picture to be printed, 5) one of removing and

breaking down non-fixed liquid toner particles to change ink acceptance behavior of the layer, 6) using the printing form in a printing process, and 7) erasing the printing form as a whole, after an end of the printing process, by removing the fixed liquid toner particles using one of a solvent, an acid or alkaline aqueous solution, a mechanical force, a high temperature, energy-bearing radiation, and ultrasound.

Doyle discloses a method of producing an image in printing plate manufacture in which a coating of powder is applied to the printing plate, exposing selected areas of the powder to laser light to melt the powder and form an image from the melted powder, and removing the non-melted powder from remaining areas of the printing plate. Doyle fails to teach applying a liquid toner to the entire printing plate, controlling the thickness of the coating, fixing liquid toner particles to the printing plate, and erasing the entire printing form after the printing process is completed, as recited in independent claim 1.

Raschke fails to teach what Doyle lacks. Raschke discloses a method for a making a printing master. According to Raschke, an entire area of a belt 10 is charged and a toner powder is applied to the entire area of the belt (see col. 3, line 56 to col. 4, line 5). Next the image pattern is selectively exposed to a corona discharge in the area of the belt so that only the powder in the area of the image adheres to the belt (col. 4, lines 34-43). A pressure roller 36 is then used to transfer the loose particles on the belt to a master sheet. The master is then treated to fix the toner to the master (col. 4, lines 51-54). Raschke does state that the toner may be removed from the master. However, Raschke discloses a two-step process in which an intermediate medium, i.e., the belt, is used to receive the coating of toner and the image and then the master is pressed onto the belt to receive the loose particles which create the image for the master sheet. That is, the master sheet does not receive an entire coating an only receives an

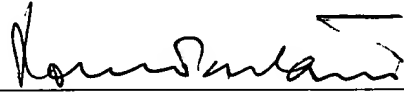
image. Therefore, the combination of Raschke and Doyle fails teach or suggest applying a liquid toner to the entire printing plate, controlling the thickness of the coating, fixing liquid toner particles to the printing plate, as recited in independent claim 1.

Calabrese fails to teach what Raschke and Doyle lack. Calabrese discloses a method of making a lithographic printing plate and comprises selectively applying an electrostatic charge to the printing plate, applying a liquid toner to the charged portions and fixing the liquid toner to provide an imaged plate (see col. 2, lines 41-49). Independent claim 1 applies a charge to the entire printing plate. Furthermore, Calabrese discloses fixing the toner to the plate by drying (see col. 3, lines 3-4). In contrast, independent claim 1 recites that the liquid toner is fixed to the printing plate with a source of energy. Therefore, it is respectfully submitted that neither Doyle, Raschke, nor Calabrese teach or suggest the steps of applying a liquid toner to the entire printing plate, controlling the thickness of the coating, fixing liquid toner particles to the printing plate, as recited in independent claim 1.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are currently due. However, if any fees or charges are required at this time in connection with the application, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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MARKED-UP VERSION OF CLAIMS SHOWING CHANGES

Please amend claims 1, 21, and 22, as follows:

1. (Amended) A method of imaging and erasing an erasable printing form, comprising the steps of:

electrically charging the printing form over its entire surface;

applying liquid toner particles, which have one of individual charges opposite the charges of the printing form, and dipole and multi-dipole moments aligned opposite the charges of the printing form, to the printing form so that the toner particles are attracted to the entire surface of the printing form to form a layer;

controlling the thickness of the layer of liquid toner particles by controlling at least one of voltage and time during the charging step;

fixing the liquid toner particles with a source of energy in accordance with a picture to be printed, and one of removing and breaking down non-fixed liquid toner particles to change ink acceptance behavior of the layer;

using the printing form in a printing process; and

erasing the printing form as a whole, after an end of a the printing process, by removing the fixed liquid toner particles using one of a solvent, an acid or alkaline aqueous solution, a mechanical force, a high temperature, energy-bearing radiation, and ultrasound.

21. (Amended) A method according to claim ~~19~~ 1, wherein the erasing step includes removing the remaining layer of fixed particles with one of an acid and an alkaline

aqueous solution ~~under high pressure, so that~~ in which the particles are dissolved under high pressure.

22. (Amended) A method according to claim ~~19~~ 1, wherein the erasing step includes removing the remaining layer of fixed particles with one of a brush and a cleaning cloth.